

Comparison Chart – Maricopa vs. Imperial Definitions (Animal Operations)
(July 23, 2013)

Commercial Dairy Operation

Current Definition	ADEQ recommended language	Imperial Definition
<p>“Aggregate cover” means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.</p>	<p>"Aggregate cover" means <u>reducing PM emissions, wind erosion, and vehicle traffic, and stabilizing soil by applying gravel, concrete, recycled road base, caliche, or other similar material applied to noncropland to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces. The aggregate should be one inch or larger in diameter, clean, hard and durable, and should be applied a minimum of four inches deep.</u></p>	<p>GRAVEL: Placing a layer of Gravel at least 3 inches in depth to minimize dust generated from vehicle movement and to dislodge any excess debris which can become entrained. Gravel should conform to the grading defined in Rule 800.</p>
<p>“Apply a fibrous layer” means reducing PM10 emissions by spreading shredded or deconstructed plant materials to cover loose soil in high animal traffic areas.</p>	<p>"Apply a fibrous layer" means reducing PM10 emissions and soil movement, <u>and preserving soil moisture by spreading shredded or deconstructed plant materials, animal waste, or biosolids, to cover loose soil in high animal traffic areas. Material shall be evenly applied to a minimum depth of two inches above the soil surface and coverage should be a minimum of 70 percent.</u></p>	<p>MULCHING: Reducing PM10 emissions and wind erosion and preserving soil moisture by uniformly applying a protective layer of plant residue or other material to a soil surface prior to disturbing the site to reduce soil movement. Mulching material shall be evenly applied, and if necessary, anchored to the soil. Mulch should achieve a minimum 70% cover, and a minimum of 2 inch height above the surface. Inorganic material used for mulching should consist of pieces of .75 to 2 inches in diameter.</p>
<p>“Bunkers” means below ground level storage systems for storing large amount of silage, which is covered with a plastic tarp.</p>		
<p>“Calves” means young dairy stock under two months of age.</p>		
<p>“Cement cattle walkways to milk barn” means reducing PM10 emissions by fencing pathways from the corrals to the milking barn, which are surfaces with concrete floors.</p>	<p>“Cement cattle walkways to milk barn” means reducing PM10 emissions by fencing pathways from the corrals to the milking barn, <u>which are restricting dairy cattle to surfaces with concrete floors.</u></p>	

Commercial Dairy Operation

Current Definition	ADEQ recommended language	Imperial Definition
“Commercial animal operator” means an individual, entity, or joint operation in general control of an animal operation.		
“Commercial dairy operation” means a dairy operation with more than 150 dairy cattle within the boundary of the Maricopa PM10 nonattainment area and Maricopa County portion of Area A or a PM10 nonattainment area designated after June 1, 2009 as stated in A.R.S. § 49-457(P)(1)(f).	Change PM10 to PM in statute and revise definition.	
“Cover manure hauling trucks” means reducing PM10 emissions by completely covering the top of the loaded area.	<p>“Cover manure hauling trucks” means reducing PM40 emissions by completely covering the top of the loaded area</p> <p>Could/would you use water to stabilize?</p>	BULK MATERIALS CONTROL: Minimize visible dust emissions from bulk materials by using dust suppressant or water to form a stabilized surface, or using a tarp to fully cover the pile or truckbed, or using a wind barrier or 3-sided structure to reduce entrainment of fugitive dust.
“Covers for silage” means reducing PM10 emissions and wind erosion by using large plastic tarps to completely cover silage.	<p>“Covers for silage” means reducing PM40 emissions and wind erosion by using large plastic tarps to completely cover silage.</p> <p>Could/would you use water to stabilize?</p>	BULK MATERIALS CONTROL: Minimize visible dust emissions from bulk materials by using dust suppressant or water to form a stabilized surface, or using a tarp to fully cover the pile or truckbed, or using a wind barrier or 3-sided structure to reduce entrainment of fugitive dust.
“Do not run cattle” means reducing PM10 emissions by walking dairy cattle to the milking bam.	“Do not run cattle” means reducing PM40 emissions by walking dairy cattle to the milking barn.	

Commercial Dairy Operation

Current Definition	ADEQ recommended language	Imperial Definition
<p>“Feed higher moisture feed to dairy cattle” means reducing PM10 emissions by feeding dairy cattle one or a combination of the following:</p> <ul style="list-style-type: none"> i. Add water to ration mix to achieve a 20% minimum moisture level, ii. Add molasses or tallow to ration mix at a minimum of 1%, iii. Add silage, or iv. Add Green Chop. 	<p>“Feed higher moisture feed to dairy cattle” means reducing PM40 emissions by feeding dairy cattle one or a combination of the following:</p> <ul style="list-style-type: none"> i. Add water to ration mix to achieve a 20% minimum moisture level, ii. Add molasses or tallow to ration mix at a minimum of 1%, iii. Add silage, or iv. <u>Add Feed Green Chop</u>. (Is this number correct? Beef cattle has it as 5%) 	
<p>“Feed green chop” means feeding high moisture feed that contains at least 30% moisture directly to dairy cattle.</p>	<p>No change.</p>	
<p>“Groom manure surface” means reducing PM10 emissions and wind erosion by:</p> <ul style="list-style-type: none"> i. Flushing or vacuuming lanes daily, ii. Scraping and harrowing pens on a weekly basis, and iii. Removing manure every four months with equipment that leaves an even corral surface of compacted manure on top of the soil. 	<p>“Groom manure surface” means reducing PM40 emissions and wind erosion by:</p> <ul style="list-style-type: none"> i. Flushing or vacuuming lanes daily, ii. Scraping and harrowing pens on a weekly basis, and iii. Removing manure every four months with equipment that leaves an even corral surface of compacted manure on top of the soil. 	
<p>“Hutches” means raised, roofed enclosures that protect the calves from the elements.</p>		

Commercial Dairy Operation

Current Definition	ADEQ recommended language	Imperial Definition
“Pile manure between cleanings” means reducing PM10 emissions by collecting loose surface materials within the confines of the surface area of the occupied feed pen to contain the loose manure materials.	“Pile manure between cleanings” means reducing PM10 emissions by collecting loose surface materials within the confines of the surface area of the occupied feed pen <u>every two weeks</u> . to contain the loose manure materials. (Please give input on a time table)	
“Provide cooling in corral” means reducing PM10 emissions by using evaporative coolers under the corral shades to reduce the ambient air temperature, thereby increasing stocking density in the cool areas of the corrals.	“Provide cooling in corral” means reducing PM10 emissions by using evaporative coolers under the corral shades to reduce the ambient air temperature, thereby increasing stocking density in the cool areas of the corrals. (Is there a % value that we could increase stocking density by? – Goal % to increase it to?)	
“Provide shade in corral” means reducing PM10 emissions by increasing stocking density and reducing animal movement by using a permanent structure, which provides at least 16 square feet per animal of shaded pen surface.	“Provide shade in corral” means reducing PM10 emissions by increasing stocking density and reducing animal movement by using a permanent structure, which provides at least 16 square feet per animal of shaded pen surface. (Is there a % value that we could increase stocking density by? – Goal % to increase it to?))	
“Push equipment” means manure harvesting equipment pushed in front of a tractor.		
“Regulated agricultural activity” means a regulated agricultural activity as defined in A.R.S. § 49-457(P)(5).		
“Regulated area” means a regulated area as defined in A.R.S. § 49-457(P)(6).		
“Silage” means fermented, high-moisture fodder that can be fed to ruminants, such as cattle and sheep; usually made from grass crops including corn, sorghum or other cereals, by using the entire green plant.		

Commercial Dairy Operation

Current Definition	ADEQ recommended language	Imperial Definition
“Store and maintain feed stock” means reducing PM10 emissions and wind erosion by storing feed stock in a covered area where the commodity is surrounded on at least three sides by a structure so that the feed stock is adequately contained.	“Store and maintain feed stock” means reducing PM40 emissions and wind erosion by storing feed stock in a covered area where the commodity is surrounded on at least three sides by a structure. so that the feed stock is adequately contained.	BULK MATERIALS CONTROL: Minimize visible dust emissions from bulk materials by using dust suppressant or water to form a stabilized surface, or using a tarp to fully cover the pile or truckbed, or using a wind barrier or 3-sided structure to reduce entrainment of fugitive dust.
“Synthetic particulate suppressant” as defined in R18-2-610.	"Synthetic particulate suppressant" means reducing PM40 emissions and wind erosion by providing a surface barrier or binding soil particles together <u>stabilized soil surface</u> on noncropland <u>during high traffic times</u> with a manufactured product such as lignosulfate, calcium chloride, magnesium chloride, an emulsion of a petroleum product, an enzyme product, or polyacrylamide that is used to control particulate matter.	CHIPS/MULCHES, ORGANIC MATERIALS, POLYMERS, ROAD OIL & SAND: Application of any nontoxic chemical or organic dust suppressant that meets all specification required by any federal, state, or local water agency and is not prohibited for use by any applicable regulations. Chips/Mulches and organic materials should meet the specifications in the mulches definition below. Polymers, road oil and sand should create a stabilized surface during high traffic times such as harvest.
“Use drag equipment to maintain pens” means reducing PM10 emissions by using manure harvesting equipment pulled behind a tractor instead of using push equipment.	“Use drag equipment to maintain pens” means reducing PM40 emissions by using manure harvesting equipment pulled behind a tractor instead of using push equipment, <u>which reduces a minimum of one pass across the operation.</u> ?? How to quantify	
“Use free stall housing” means reducing PM10 emissions by enclosing one cow per stall, which are outfitted with concrete floors.	“Use free stall housing” means reducing PM40 emissions by enclosing one cow per stall, which are outfitted with concrete floors.	
“Water misting systems” means reducing PM10 emissions from dry manure by using systems that project a cloud of very small water particles onto the manure surface.	“Water misting systems” means reducing PM40 emissions from dry manure by using systems that project a <u>constant</u> cloud of very small water particles onto the manure surface, <u>keeping the surface is visibly moist.</u>	WATER APPLICATION: Application of water to unpaved roads and traffic areas to create a visibly moist surface.

Commercial Dairy Operation

Current Definition	ADEQ recommended language	Imperial Definition
“Wind barrier” means reducing PM10 emissions and wind erosion by constructing a fence or structure, or providing a woody vegetative barrier by planting a row of trees or shrubs, perpendicular or across the prevailing wind direction to reduce wind speed by changing the pattern of air flow over the land surface.	“Wind barrier” means reducing PM10 emissions and wind erosion by constructing a fence or structure, or providing a woody vegetative barrier by planting a row of trees or shrubs, perpendicular or across the prevailing wind direction to reduce wind speed by changing the pattern of air flow over the land surface. <u>The structure or vegetative barrier shall have a porosity of at least 50% and the protected area must be less than or equal to ten times the height of the windbreak.</u>	WIND BARRIER: Reduce wind erosion by planting or maintaining perennial or annual plants established in rows or narrow strips interspersed throughout a crop field as close to perpendicular as practical with the direction of erosive winds. To be effective, the selected plant(s) must create a stand at least three feet tall, with a porosity of 50%.

Beef Cattle Feedlot

Current Definition	ADEQ recommended language	Imperial Definition
“Add moisture to pen surface” means reducing PM10 emissions and wind erosion by applying at least three to six gallons of water per head/per day in pens occupied by beef cattle.	“Add moisture to pen surface” means reducing PM10 emissions and wind erosion by applying at least three to six gallons of water per head/per day in pens occupied by beef cattle.	
“Add molasses or tallow to feed” means reducing PM10 emissions by adding molasses or tallow so that it equals five percent of the total ration.	“Add molasses or tallow to feed” means reducing PM10 emissions by adding molasses or tallow so that it equals five percent of the total ration. (See above, dairy)	
“Aggregate cover” means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.	See above, dairy operations.	See above, dairy operations.

Beef Cattle Feedlot

Current Definition	ADEQ recommended language	Imperial Definition
“Apply a fibrous layer in working areas” means reducing PM10 emissions by spreading shredded or deconstructed plant materials to cover loose soil.	<p>“Apply a fibrous layer in working areas” means reducing PM10 emissions <u>and soil movement, and preserving soil moisture</u> by spreading shredded or deconstructed plant materials, <u>animal waste, or biosolids</u>, to cover loose soil in high animal traffic areas. <u>Material shall be evenly applied to a minimum depth of two inches above the soil surface and coverage should be a minimum of 70 percent.</u></p> <p>(See above, dairy operations)</p>	MULCHING: Reducing PM10 emissions and wind erosion and preserving soil moisture by uniformly applying a protective layer of plant residue or other material to a soil surface prior to disturbing the site to reduce soil movement. Mulching material shall be evenly applied, and if necessary, anchored to the soil. Mulch should achieve a minimum 70% cover, and a minimum of 2 inch height above the surface. Inorganic material used for mulching should consist of pieces of .75 to 2 inches in diameter.
“Bulk materials” means reducing PM10 emissions by distributing or hauling grain, supplements, or mixed feeds via motorized vehicle.	<p>“Bulk materials” means reducing PM10 emissions by distributing or hauling grain, supplements, or mixed feeds via motorized vehicle.</p> <p>How does this reduce dust? Can we clarify by adding that the load should be fully covered?</p>	BULK MATERIALS CONTROL: Minimize visible dust emissions from bulk materials by using dust suppressant or water to form a stabilized surface, or using a tarp to fully cover the pile or truckbed, or using a wind barrier or 3-sided structure to reduce entrainment of fugitive dust.
“Commercial animal operator” means an individual, entity, or joint operation in general control of an animal operation.		
“Commercial beef cattle feedlot” means a beef cattle feedlot with more than 500 beef cattle within the boundary of the Maricopa PM10 nonattainment area and Maricopa County portion of Area A or a PM10 nonattainment area designated after June 1, 2009 as stated in A.R.S. § 49-457(P)(1)(f).	See above, “Commercial Dairy Operation”	
“Concrete apron” means reducing PM10 emissions by using solidly formed concrete surface, at least 4 inches thick on top of the soil surface, inside the feed pen for 8 feet approaching the feed bunk or water trough.	No change.	

Beef Cattle Feedlot

Current Definition	ADEQ recommended language	Imperial Definition
“Control cattle during movements” means reducing PM10 emissions by suppressing the animal’s ability to run by driving them forward while intruding on their “flight zones” or restraining the animal’s movement.	“Control cattle during movements” means reducing PM 10 emissions by suppressing the animal’s ability to run by driving them forward while intruding on their “flight zones” or restraining the animal’s movement.	
“Cover manure hauling trucks” means reducing PM10 emissions by completely covering the top of the loaded area.	“Cover manure hauling trucks” means reducing PM 10 emissions by completely covering the top of the loaded area.	BULK MATERIALS CONTROL: Minimize visible dust emissions from bulk materials by using dust suppressant or water to form a stabilized surface, or using a tarp to fully cover the pile or truckbed, or using a wind barrier or 3-sided structure to reduce entrainment of fugitive dust.
“Feed higher moisture feed to beef cattle” means reducing PM10 emissions by feeding beef cattle feed that contains at least 30% moisture.	“Feed higher moisture feed to beef cattle” means reducing PM 10 emissions by feeding beef cattle feed that contains at least 30% moisture.	
“Frequent manure removal” means reducing PM10 emissions and wind erosion by harvesting loose manure on top of the pen surface at least once every six months.	“Frequent manure removal” means reducing PM 10 emissions and wind erosion by harvesting loose manure on top of the pen surface at least once every six months.	
“Higher moisture feeds” means reduce PM10 emissions by feeding beef cattle feed that contains at least 30% moisture.	“Higher moisture feeds” means reduce PM 10 emissions by feeding beef cattle feed that contains at least 30% moisture.	
“Increase manure moisture” means reducing PM10 emissions by increasing the fluids consumed and excreted by cattle.	“Increase manure moisture” means reducing PM 10 emissions by increasing the fluids consumed and excreted by cattle by ____%. (Please help quantify)	
“Pile manure between cleanings” means reducing PM10 emissions by collecting loose manure surface materials, by scraping or pushing, within the confines of the surface area of the occupied feed pen to contain loose manure materials.	“Pile manure between cleanings” means reducing PM 10 emissions by collecting loose surface materials within the confines of the surface area of the occupied feed pen every two weeks. to contain the loose manure materials. (Please give input on a time table)	

Beef Cattle Feedlot

Current Definition	ADEQ recommended language	Imperial Definition
“Provide shade in corral” means reducing PM10 emissions by increasing stocking density and reducing animal movement by using a permanent structure, which provides at least 16 square feet per animal of shaded pen surface.	“Provide shade in corral” means reducing PM10 emissions by increasing stocking density and reducing animal movement by using a permanent structure, which provides at least 16 square feet per animal of shaded pen surface. (Is there a % value that we could increase stocking density by? Goal % to increase it to?)	
“Push equipment” means manure harvesting equipment pushed in front of a tractor.		
“Regulated agricultural activity” means a regulated agricultural activity as defined in A.R.S. § 49-457(P)(5).		
“Regulated area” means a regulated area as defined in A.R.S. § 49-457(P)(6).		
“Store and maintain feed stock” means reducing PM10 emissions and wind erosion by storing feed stock in a covered area where the commodity is surrounded on at least three sides by a structure so that the feed stock is adequately contained.	“Store and maintain feed stock” means reducing PM10 emissions and wind erosion by storing feed stock in a covered area where the commodity is surrounded on at least three sides by a structure. so that the feed stock is adequately contained.	BULK MATERIALS CONTROL: Minimize visible dust emissions from bulk materials by using dust suppressant or water to form a stabilized surface, or using a tarp to fully cover the pile or truckbed, or using a wind barrier or 3-sided structure to reduce entrainment of fugitive dust.
“Synthetic particulate suppressant” as defined in R18-2-610.	See above, dairy operations.	
“Use drag equipment to maintain pens” means reducing PM10 emissions by using manure harvesting equipment pulled behind a tractor instead of using push equipment.	“Use drag equipment to maintain pens” means reducing PM10 emissions by using manure harvesting equipment pulled behind a tractor instead of using push equipment, <u>which reduces a minimum of one pass across the operation.</u> ?? How to quantify	

Beef Cattle Feedlot

Current Definition	ADEQ recommended language	Imperial Definition
“Wind barrier” means reducing PM10 emissions and wind erosion by constructing a fence or structure, or providing a woody vegetative barrier by planting a row of trees or shrubs, perpendicular or across the prevailing wind direction to reduce wind speed by changing the pattern of air flow over the land surface.	See above, dairy operations.	See above, dairy operations.

Commercial Poultry Facility

Current Definition	ADEQ recommended language	Imperial Definition
“Add moisture through ventilation systems” means reducing PM10 emissions by using a ventilation system that is designed to allow stock to maintain their normal body temperature without difficulty while adding sufficient moisture to the air within the housing system to bind small particles to larger particles.	“Add moisture through ventilation systems” means reducing PM10 emissions by using a ventilation system that is designed to allow stock to maintain their normal body temperature without difficulty while adding sufficient moisture to the air within the housing system to bind small particles to larger particles. (How to quantify? Is there a % of moisture to add?)	
“Add oil and/or moisture to the feed” means reducing PM10 emissions by adding edible oil and/or moisture to feed rations to bind small particles to larger particles.	“Add oil and/or moisture to the feed” means reducing PM10 emissions by adding edible oil and/or moisture to feed rations to bind small particles to larger particles. (How to quantify? Is there a % of moisture to add? – beef cattle has a % value)	
“Aggregate cover” means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.	See above, dairy operations	See above, dairy operations

Commercial Poultry Facility

Current Definition	ADEQ recommended language	Imperial Definition
“Clean aisles between cage rows” means reducing PM10 emissions by cleaning the aisles between cage rows at least twice every 14 days to prevent dried manure, spilled feed, and debris accumulation.	“Clean aisles between cage rows” means reducing PM 10 emissions by cleaning the aisles between cage rows at least twice every 14 days to prevent dried manure, spilled feed, and debris accumulation.	
“Clean fans, louvers, and soffit inlets in a commercial poultry facility” means reducing PM10 emissions by cleaning fans, louvers, and soffit inlets when the facility is empty between depopulating and populating the facility.	“Clean fans, louvers, and soffit inlets in a commercial poultry facility” means reducing PM 10 emissions by cleaning fans, louvers, and soffit inlets when the facility is empty between depopulating and populating the facility. (How often does this happen? Can we quantify by stating “at least every 6 months?”)	
“Clean floors and walls in a commercial poultry facility” means reducing PM10 emissions by cleaning floors and walls to prevent dried manure, spilled feed, and debris accumulation when the facility is empty between depopulating and populating the facility.	“Clean floors and walls in a commercial poultry facility” means reducing PM 10 emissions by cleaning floors and walls to prevent dried manure, spilled feed, and debris accumulation when the facility is empty between depopulating and populating the facility. (How often does this happen? Can we quantify by stating “at least every 6 months?” Can we combine with the above definition?)	
“Commercial animal operator” means an individual, entity, or joint operation in general control of an animal operation.		
“Commercial poultry facility” means a poultry operation with more than 25,000 egg laying hens within the boundary of the Maricopa PM10 nonattainment area and Maricopa County portion of Area A or a PM10 nonattainment area designated after June 1, 2009 as stated in A.R.S. § 49-457(P)(1)(f).	“Commercial poultry facility” means a poultry operation with more than 25,000 egg laying hens within the boundary of the Maricopa PM 10 nonattainment area and Maricopa County portion of Area A or a PM 10 nonattainment area designated after June 1, 2009 as stated in A.R.S. § 49-457(P)(1)(f). (See above, “Commercial Dairy Operation”	

Commercial Poultry Facility

Current Definition	ADEQ recommended language	Imperial Definition
“Control vegetation on building exteriors” means reducing PM10 emissions by removing, cutting, or trimming vegetation that accumulates PM10 and restricts ventilation of the building.	“Control vegetation on building exteriors” means reducing PM10 emissions by removing, cutting, or trimming vegetation that accumulates PM10 and restricts ventilation of the building. (Removing at least what %?)	
“Enclose transfer points” means reducing PM10 emissions by enclosing the points of transfer between the enclosed, weatherproof storage structure and the enclosed feed distribution system, which reduce air contact with the feed rations during feed conveyance.	“Enclose transfer points” means reducing PM10 emissions by enclosing the points of transfer between the enclosed, weatherproof storage structure and the enclosed feed distribution system, which reduce air contact with the feed rations during feed conveyance to improve capture efficiency to ____%. (How much does this reduce contact? Can we put a % value on it?)	
“House in fully enclosed ventilated buildings” means reducing PM10 emissions by utilizing fully enclosed buildings with sufficient ventilation.	“House in fully enclosed ventilated buildings” means reducing PM10 emissions by utilizing fully enclosed buildings with sufficient ventilation. (How much does this reduce emissions? Can we put a % value on it?)	
“Maintain moisture in manure solids” means reducing PM10 emissions by maintaining moisture in the solids sufficient to bind small particles to larger particles.	“Maintain moisture in manure solids” means reducing PM10 emissions by maintaining moisture in the solids sufficient to bind small particles to larger particles. (Can we put a % value on it?)	
“Minimize drop distance” means reducing PM10 emissions by designing the feed distribution system to minimize the distance the feed ration drops from the feed distribution system into feeders, which reduces air contact with the feed rations during feed conveyance.	“Minimize drop distance” means reducing PM10 emissions by designing the feed distribution system to minimize the distance the feed ration drops from the feed distribution system into feeders, which reduces air contact with the feed rations during feed conveyance. (How much does this reduce contact? Reduce drop distance to ____ feet or less?)	
“Poultry” means any domesticated bird including chickens, turkeys, ducks, geese, guineas, ratites and squabs.		

Commercial Poultry Facility

Current Definition	ADEQ recommended language	Imperial Definition
“Regulated agricultural activity” means a regulated agricultural activity as defined in A.R.S. § 49-457(P)(5).		
“Regulated area” means a regulated area as defined in A.R.S. § 49-457(P)(6).		
“Remove spilled feed” means reducing PM10 emissions by removing spilled feed from the housing facility at least once every 14 days.	“Remove spilled feed” means reducing PM10 emissions by removing spilled feed from the housing facility at least once every 14 days.	
“Stack separated manure solids” means reducing PM10 emissions and wind erosion by reducing the amount of exposed surface area of manure solids.	“Stack separated manure solids” means reducing PM10 emissions and wind erosion by reducing the amount of exposed surface area of manure solids. (Can we quantify?)	
“Store feed” means reducing PM10 emissions by storing feed in a structure that is enclosed and weatherproof, which reduces air contact with the feed rations during feed storage.	“Store feed” means reducing PM10 emissions by storing feed in a structure that is enclosed and weatherproof, which reduces air contact with the feed rations during feed storage. (Can we quantify?)	
“Synthetic particulate suppressant” as defined in R18-2-610	See above, dairy operations	See above, dairy operations
“Use enclosed feed distribution system” means reducing PM10 emissions by using an enclosed feed conveyance system that distributes feed rations throughout the housing facility, which reduces air contact with the feed rations during feed conveyance.	“Use enclosed feed distribution system” means reducing PM10 emissions by using an enclosed feed conveyance system that distributes feed rations throughout the housing facility, which reduces air contact with the feed rations during feed conveyance. (How much does this reduce contact? Can we put a % value on it?)	
“Use a flexible discharge spout” means reducing PM10 emissions and wind erosion at the time of bulk feed deliveries to the housing units by using a flexible discharge spout on the end of the feed truck transfer auger.	“Use a flexible discharge spout” means reducing PM10 emissions and wind erosion at the time of bulk feed deliveries to the housing units by using a flexible discharge spout on the end of the feed truck transfer auger. (How to quantify?)	

Commercial Poultry Facility

Current Definition	ADEQ recommended language	Imperial Definition
“Use no bedding in the production facility” means reducing PM10 emissions by not using bedding such as wood shavings, sawdust, peanut hulls, straw, or other organic material.	“Use no bedding in the production facility” means reducing PM40 emissions by not using bedding such as wood shavings, sawdust, peanut hulls, straw, or other organic material.	

Commercial Swine Facility

Current Definition	ADEQ recommended language	Imperial Definition
“Add oil and/or moisture to the feed” means reducing PM10 emissions by adding edible oil and/or moisture to feed rations to bind small particles to larger particles.	“Add oil and/or moisture to the feed” means reducing PM40 emissions by adding edible oil and/or moisture to feed rations to bind small particles to larger particles. (How to quantify? Is there a % of moisture to add? Beef cattle has a %)	
“Add moisture through ventilation systems” means reducing PM10 emissions by using a ventilation system that is designed to allow stock to maintain their normal body temperature without difficulty while adding sufficient moisture to the air within the housing system to bind small particles to larger particles.	“Add moisture through ventilation systems” means reducing PM40 emissions by using a ventilation system that is designed to allow stock to maintain their normal body temperature without difficulty while adding sufficient moisture to the air within the housing system to bind small particles to larger particles. (How to quantify? Is there a % of moisture to add?)	
“Aggregate cover” means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.	See above, dairy operations	See above, dairy operations
“Clean aisles between pens and stalls” means reducing PM10 emissions by cleaning the aisles between pens and stalls at least twice every 14 days to prevent dried manure, spilled feed, and debris accumulation.	“Clean aisles between pens and stalls” means reducing PM40 emissions by cleaning the aisles between pens and stalls at least twice every 14 days to prevent dried manure, spilled feed, and debris accumulation.	

Commercial Swine Facility

Current Definition	ADEQ recommended language	Imperial Definition
<p>“Clean fans, louvers, and soffit inlets in a commercial swine facility” means reducing PM10 emissions by cleaning fans, louvers, and soffit inlets between transfer of animal groups.</p>	<p>“Clean fans, louvers, and soffit inlets in a commercial poultry facility” means reducing PM10 emissions by cleaning fans, louvers, and soffit inlets when the facility is empty between depopulating and populating the facility. (How often does this happen? Can we quantify by stating “at least every 6 months?”)</p>	
<p>“Clean pens, floors and walls in a commercial swine facility” means reducing PM10 emissions by cleaning pens, floors, and walls between transfer of animal groups to prevent dried manure, spilled feed, and debris accumulation.</p>	<p>“Clean pens, floors and walls in a commercial swine facility” means reducing PM10 emissions by cleaning pens, floors, and walls between transfer of animal groups to prevent dried manure, spilled feed, and debris accumulation. (How often does this happen? Can we quantify by stating “at least every 6 months?” Can we combine this definition with above/)</p>	
<p>“Commercial animal operator” means an individual, entity, or joint operation in general control of a animal operation.</p>		
<p>“Commercial swine facility” means a swine operation with more than 50 animal units for more than 30 consecutive days within the boundary of the Maricopa PM10 nonattainment area and Maricopa County portion of Area A or a PM10 nonattainment area designated after June 1, 2009 as stated in A.R.S. § 49-457(P)(1)(f). One thousand pounds equals one animal unit.</p>		
<p>“Control vegetation on building exteriors” means reducing PM10 emissions by removing, cutting, or trimming vegetation that accumulates PM10 and restricts ventilation of the building.</p>	<p>“Control vegetation on building exteriors” means reducing PM10 emissions by removing, cutting, or trimming vegetation that accumulates PM10 and restricts ventilation of the building. (Removing at least what %?)</p>	

Commercial Swine Facility

Current Definition	ADEQ recommended language	Imperial Definition
“Enclose transfer points” means reducing PM10 emissions by enclosing the points of transfer between the enclosed, weatherproof storage structure and the enclosed feed distribution system, which reduces air contact with the feed rations during feed conveyance.	“Enclose transfer points” means reducing PM10 emissions by enclosing the points of transfer between the enclosed, weatherproof storage structure and the enclosed feed distribution system, which reduce air contact with the feed rations during feed conveyance <u>to improve capture efficiency to ____%.</u> (How much does this reduce contact? Can we put a % value on it?)	
“House in fully enclosed ventilated buildings” means reducing PM10 emissions by utilizing fully enclosed buildings with sufficient ventilation.	“House in fully enclosed ventilated buildings” means reducing PM10 emissions by utilizing fully enclosed buildings with sufficient ventilation. (How much does this reduce emissions? Can we put a % value on it?)	
“Lagoon” means a liquid manure storage and treatment pond.		
“Maintain moisture in manure solids” means reducing PM10 emissions by maintaining moisture in the solids sufficient to bind small particles to larger particles.	“Maintain moisture in manure solids” means reducing PM10 emissions by maintaining moisture in the solids sufficient to bind small particles to larger particles. (Can we put a % value on it?)	
“Minimize drop distance” means reducing PM10 emissions by designing the feed distribution system to minimize the distance the feed ration drops from the feed distribution system into feeders, which reduces air contact with the feed rations during feed conveyance.	“Minimize drop distance” means reducing PM10 emissions by designing the feed distribution system to minimize the distance the feed ration drops from the feed distribution system into feeders, which reduces air contact with the feed rations during feed conveyance. (How much does this reduce contact? Reduce drop distance to ____ feet or less?)	
“Regulated agricultural activity” means a regulated agricultural activity as defined in A.R.S. § 49-457(P)(5).		
“Regulated area” means a regulated area as defined in A.R.S. § 49-457(P)(6).		

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Current Definition	ADEQ recommended language	Imperial Definition
“Remove spilled feed” means reducing PM10 emissions by removing spilled feed from the housing facility at least once every 14 days.	“Remove spilled feed” means reducing PM10 emissions by removing spilled feed from the housing facility at least once every 14 days.	
“Slatted flooring” means reducing PM10 emissions by using flooring that is a slotted concrete or wire-mesh floor set above a liquid manure collection pit, which allows the excrement to fall through the flooring into the liquid pit below.	“Slatted flooring” means reducing PM10 emissions by using flooring that is a slotted concrete or wire-mesh floor set above a liquid manure collection pit, which allows the excrement to fall through the flooring into the liquid pit below. (How does this reduce emissions? Can we quantify?)	
“Sloped concrete flooring” means reducing PM10 emissions by pouring concrete with a minimum of 0.25% grade inside of the barns which provides drainage and easier cleaning of floor areas.	“Sloped concrete flooring” means reducing PM10 emissions by pouring concrete with a minimum of 0.25% grade inside of the barns which provides drainage and easier cleaning of floor areas. (How to quantify?)	
“Stack separated manure solids” means reducing PM10 emissions and wind erosion by reducing the amount of exposed surface area of manure solids.	“Stack separated manure solids” means reducing PM10 emissions and wind erosion by reducing the amount of exposed surface area of manure solids. (Can we quantify?)	
“Store feed” means reducing PM10 emissions by storing feed in a structure that is enclosed and weatherproof, which reduces air contact with the feed rations during feed storage.	“Store feed” means reducing PM10 emissions by storing feed in a structure that is enclosed and weatherproof, which reduces air contact with the feed rations during feed storage. (Can we quantify? Capture efficiency?)	
“Store separated manure solids” means reducing PM10 emissions by storing manure solids in a wind-blocked area behind a wall, structure, or area with natural wind protection to minimize blowing air movement over the manure stack.		
“Synthetic particulate suppressant” as defined in R18-2-610.	See above, dairy operations	See above, dairy operations

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Current Definition	ADEQ recommended language	Imperial Definition
<p>“Use a flexible discharge spout” means reducing PM10 emissions and wind erosion at the time of bulk feed deliveries to the housing units by using a flexible discharge spout on the end of the feed truck transfer auger.</p>	<p>“Use enclosed feed distribution system” means reducing PM40 emissions by using an enclosed feed conveyance system that distributes feed rations throughout the housing facility, which reduces air contact with the feed rations during feed conveyance. (How much does this reduce contact? Can we put a % value on it?)</p>	
<p>“Use enclosed feed distribution system” means reducing PM10 emissions by using an enclosed feed conveyance system that distributes feed rations throughout the housing facility, which reduces air contact with the feed rations during the feed conveyance.</p>	<p>“Use a flexible discharge spout” means reducing PM40 emissions and wind erosion at the time of bulk feed deliveries to the housing units by using a flexible discharge spout on the end of the feed truck transfer auger. (How to quantify?)</p>	
<p>“Use no bedding in the production facility” means reducing PM10 emissions by not using bedding such as wood shavings, sawdust, peanut hulls, straw, or other organic material.</p>	<p>“Use no bedding in the production facility” means reducing PM40 emissions by not using bedding such as wood shavings, sawdust, peanut hulls, straw, or other organic material.</p>	